Request Segmentation

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Request Segmentation
Description

Overview

The request segmentation scenario describes the proposed method of Data Server handling of a large request. For a request to be segmented either the volume of the ordered data or the number of the ordered files must exceed a specified threshold. Such request will be segmented on file boundaries. Request segmentation will be automated in Release B.

Assumptions

• The system is operating in nominal (operational) mode, with all equipment operational.

Request Segmentation
Description

Scenario

- A large request is flagged by volume or number of files.
- Requestor of the electronic transfer of a segmented request is notified of request segmentation
- Requestor is notified separately (normal request notification) of each electronically transferred request segment
- Requestor may cancel the request at any point
- Hard media distribution of a segmented request is handled as a normal request
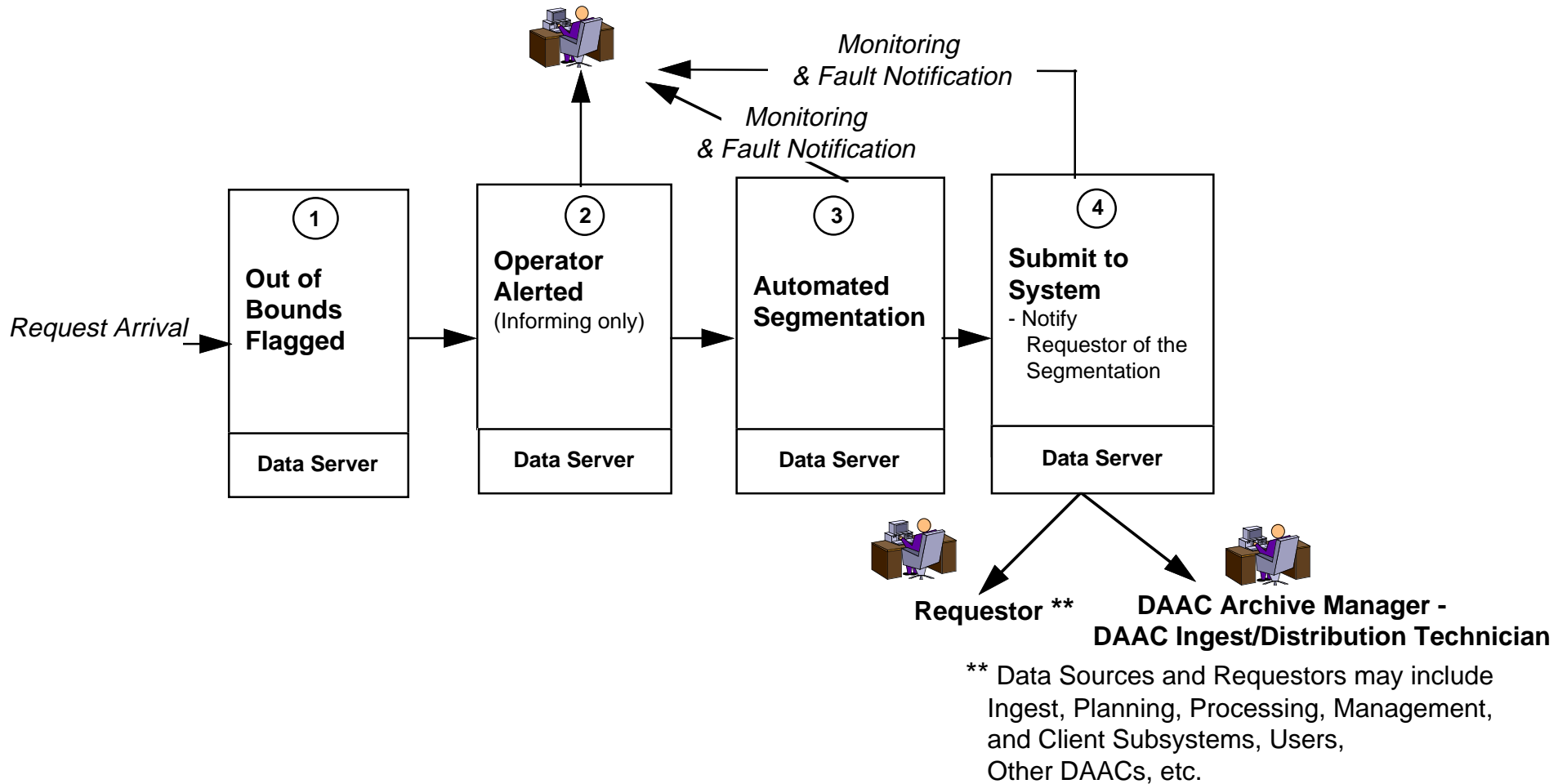
Heritage

- Large requests are flagged by volume or number of files (CDR-A)
- Request Segmentation will be automated in Release B (IDR-B)
- Proposed method: segment by file
  - Based on Statistics Collecting and Reporting System
  - User Services at GSFC
  - Modeling Projection

Request Segmentation Activities

Functional Flow

DAAC Archive Manager - DAAC Ingest/Distribution Technician

Monitoring & Fault Notification

Monitoring & Fault Notification

Request Arrival →

(1)
Out of Bounds Flagged

Data Server

→

(2)
Operator Alerted
(Informing only)

Data Server

→

(3)
Automated Segmentation

Data Server

→

(4)
Submit to System
- Notify Requestor of the Segmentation

Data Server

Requestor **

DAAC Archive Manager - DAAC Ingest/Distribution Technician

** Data Sources and Requestors may include Ingest, Planning, Processing, Management, and Client Subsystems, Users, Other DAACs, etc.

Request Segmentation Activities
Points of View

DAAC Ingest/Distribution Technician

DAAC Archive Manager

SMC Resource Controller

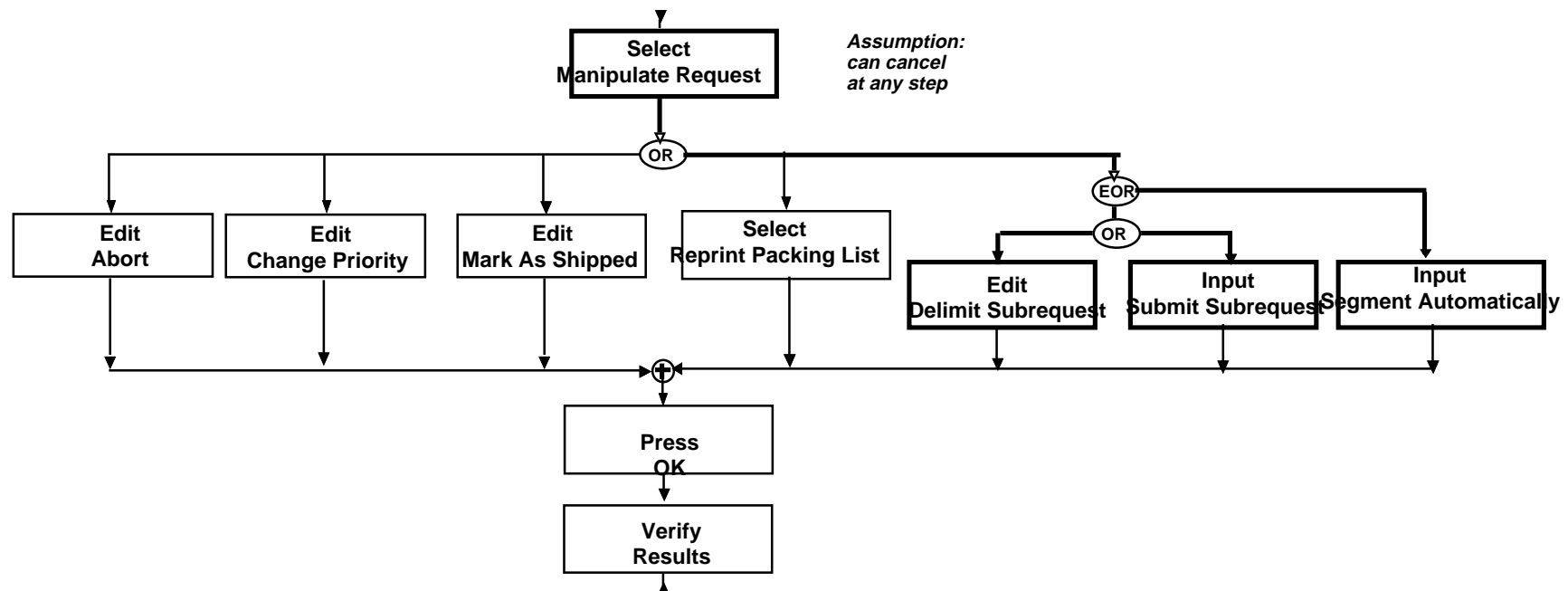| DAAC Operations View	ECS System	DAAC Operation View	SMC Operations View
Alert for a segmented request (informing only)	Segment Request	Review alert and associated status and faults.	System-wide request monitoring/ review

Request Segmentation Workflow (Proposed)

Activity - Request Segmentation Information

Role   **- DAAC Ingest/Distribution Technician**
     - DAAC Archive Manager

Data Server Data Distribution

```
                    ┌──────────────────────┐
                    │       Select         │     Assumption:
                    │  Manipulate Request  │     can cancel
                    └──────────────────────┘     at any step
                              │
                            ( OR )
```

Select Manipulate Request → OR →

- **Edit** / **Abort**
- **Edit** / **Change Priority**
- **Edit** / **Mark As Shipped**
- **Select** / **Reprint Packing List**
- (EOR) → (OR):
  - **Edit** / **Delimit Subrequest**
  - **Input** / **Submit Subrequest**
- **Input** / **Segment Automatically**

→ (+) →

- **Press OK**
- **Verify Results**

Request Segmentation - Data Activity

Distribution Operator Function	Data Element	Operator Interactions
Manipulate Request	View Individual Requests Abort Change Priority Mark as Shipped Reprint Packing List Delimit Subrequest Submit Subrequest Segment Automatically	Display Edit Edit Edit Display Edit Input Input